学校编码： 14771165　　　　分类号______密级______

学 号：27720111154399　　　　UDC___

厦门大学

硕 士 学 位 论 文

经济增长及管治:面板数据分析

Economic Growth and Governance:A Panel Data Analysis

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论文提交日期:　　2013年 月

论文答辩日期:　　2013年 月

学位授予日期:　　2013年 月

答辩委员会主席：___

评 阅 人：___

2013 年 03 月

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摘要

本论文是关于经济增长, 它也强调了治理的重要性作为一个有效的因素在实现长期增长。国家一直在追求长期增长, 一些已经获得它, 而一些没有和落后于其他国家。为了理解的动态增长和治理, 作者着手证明市场增进加强治理适用于发达国家, 而增长增进加强治理适用于发展中国家。面板数据分析是开展以检验假设。回归结果表明, 市场增进加强变量可以帮助解释发达国家的情况，而令人费解的结果对于发展中国家使用增长增进。

关键词： 经济增长，市场增进，增长增进，长期增长

Abstract

This thesis is about economic growth, and it highlights the importance of governance as an effective factor in attaining long-term growth. Countries have been aiming for long-term growth, and some have attained it, while some did not and lagged behind others. In order to understand the dynamics of growth and governance, the author sets out to prove that market-enhancing governance is suitable for developed countries, while growth-enhancing governance is suitable for developing countries. Panel data analysis was carried out in order to empirically test the assumptions. Regression results showed that market-enhancing variables can help explain the case of developed countries, while puzzling results were obtained for developing countries using growth-enhancing variables.

Key Words: economic growth, market-enhancing, growth-enhancing, long-term growth

Contents

Chapter 1 Introduction of the study

This research highlights the importance of sound and effective governance across countries. But unlike past researches, this study focuses on the governance capacities and capabilities seen as unique for developed and developing countries. For many years, economists have been puzzled by what accounts for economic growth of countries. Embedded in this puzzle is the question on which factors make some countries grow faster, while some countries don't grow fast enough and lag behind others. Numerous theories have been explored in order to understand what accounts for growth of different countries, for example, using growth regressions that utilize data on economic variables. This particular research will empirically validate that different types of governance capacities and capabilities produce different results in different settings, as market-enhancing governance is believed to be more suitable and effective in developed countries, and growth-enhancing governance is more suitable and effective to developing countries. In order to do this, the author employed governance indicators as data points in the regression analysis.

Chapter 2 The problem and its settings

2.1 Statement of the problem

With market-enhancing governance focusing on government effectiveness, rule of law and control of corruption, and growth-enhancing governance focusing on property rights, technology catching up and overall political stability, this study investigates the following question:

Is there empirical evidence of higher positive impact of market-enhancing governance on developed countries than developing countries, and of higher positive impact of growth-enhancing governance on developing countries than developed countries?

2.2 Hypothesis

This study takes the hypothesis that positive, significant results would be found if market-enhancing governance are implemented in developed countries, and if growth-enhancing governance are implemented in developing countries. This hypothesis is tested using a growth accounting method proposed by Daron Acemoglu based on the Solow growth model. That particular model is utilized by doing a regression analysis using economic growth-related variables, such as inflation, growth rates, openness to trade, among others, plus variables pertaining to governance, which are obtained from governance indicators.

2.3 Limitations of the study

This study is limited in such a way that the data points are scarce as regards governance indicators, since these indicators are measures that are more recently gathered and tabulated, which is as early as 1980s. It would be a great opportunity to have longer data points, and as a result would make a more robust analysis regarding economic growth and governance. But due to data restrictions on governance, this is not the case. There were attempts to use proxies or instruments in order to extend the data points, but obtained unsatisfactory results, thus, the study sticking to the original set of governance indicators data. This study goes as far as the data goes.

2.4 Definition of terms

a. Governance capacities and capabilities – the abilities of governments to effectively perform duties in order to efficiently provide the goods and services to its citizens.

b. Governance indicators – numerical measure of countries' governments' performance based on certain criteria provided by different institutions.

c. Market-enhancing – governance strategy suitable to developed countries such as control of corruption, rule of law and government effectiveness.

d. Growth-enhancing – governance strategy suitable to developing countries such as political stability, property rights and technological catch-up

e. Economic growth – increase in the capacity of an economy to produce goods and services, compare from one period of time to another.

f. Growth accounting method – is a procedure used in economics to measure the contribution of different factors to economic growth and to indirectly compute the rate of technological progress.

2.5 Importance of the study

This research provides an improved empirical analysis on testing the significance of the two types of governance capabilities: market-enhancing and growth-enhancing. An empirical analysis aside from simple averaging and graphical analysis hasn't been done to test the significance and measure the specific impact of the two governance types. This research does an analysis using regression tools in order to shed more light on discussions concerning governance and growth. A panel data regression analysis is employed to check if the assumptions mentioned above can be empirically validated.

Chapter 3 Review of related literature

This section will have two main discussions: the development of economic growth and governance through time. Although these topics are very diverse and encompassing, the author did its best to pick up the most relevant aspects of economic growth and governance that is very much related to this current study. The discussion will be as follows: firstly, there will be a summary of economic growth theories, more particularly endogenous growth theory; secondly, several past studies will be presented that highlights the use data in explaining economic growth, also known as growth empirics; and lastly, there will be a presentation of the long-standing relationship of economic growth and governance. At the end, there would be an explanation on the dynamics of growth theory, growth empirics and governance.

3.1 Growth theory

Growth theory's rich literature extends from the Keynesian economics, also known as the classical economics, and eventually got developed and expanded through time in the advent of other economic schools of thought: neoclassical theory, new Keynesian theory, real business cycle, and dynamic stochastic general equilibrium.[1] This study will focus on endogenous growth theory.

Endogenous growth theory simply states that growth is an outcome of an economic system. It follows the tradition of economists where output is explained by two inputs of production: capital and labor. Endogenous growth theory is the by-product of rigorous discussions that began at the time of neoclassical economists, from whom it owes its theoretical and empirical foundations. This subsection will discuss the theoretical aspects, while the next subsection will explain the empirical aspect. In summary, neoclassical economists believe that exogenous technological changes explain why income per capita has increased through time. And because of

[1] Romer, P. (1994). The Origins of Endogenous Growth. Journal of Economic Perspectives. Vol. 8, Num. 1, pp. 3-22

this, they have formulated the so-called "growth accounting residual," the unexplained term in growth accounting formula aside from labor and capital.

The theoretical framework of endogenous growth theory is based on the simple equation

$$Y(t) = F\,[K(t), L(t), A(t)]$$

where K(t) is capital, L(t) is labor and A(t) is technological component. This base equation is expanded to derive the fundamental growth accounting equation, the measure of contribution from technological progress to economic growth. Since the components K(t) and L(t) are measurable, using data from different countries, economists tend to estimate A(t) in their growth regressions, and refer to it as total factor productivity. Generally, endogenous growth theory follows two overarching themes: the concepts of convergence and the perfect competition.

The convergence theory tells us that per capita income of different countries will converge through time.[2] It is believed that since poor countries have lower levels of starting income, given the same technology available for poor and rich countries, poor countries will have higher income growth rates and in the process they will be able to catch up and converge with the income rich countries. But this theory is not without flaw, as economists have termed it the "convergence controversy." Empirical findings show that using the Heston and Summers data, poor countries tend to grow no faster than rich countries, the results having a clear disagreement with theory. This prompted economists to further study the topic at hand, and as a result, coined the term "conditional convergence," with the assumption that certain countries converge conditional of other variables being held constant.

2 Romer, P. (1994). The Origins of Endogenous Growth. Journal of Economic Perspectives. Vol. 8, Num. 1, pp. 3-22

Perfect competition, on the other hand, has been a recurring theme among economic theorists. They are having a hard time on how to incorporate this concept in their models. Models have been utilizing the assumption of having a monopoly, and it has been a useful tool for numerous models, but the problem is that its characteristics have been taken for granted ever since. An economy typically has many firms, especially in a market economy; at the same time, these individuals and firms have market power and earn monopoly rents on discoveries; discoveries differ from other inputs in the sense that many people can use them at the same time. Although perfect competition suits all the characteristics of a market economy above, economists continue on using the monopoly assumption, in order to have more favorable outcomes in their models.

Despite the approval of many economists on the intellectual appeal of endogenous growth theory, there are others who criticize its contents. Some of the challenges that endogenous growth theorists encounter, in connection to the ones mentioned above, are provided by Howard Pack in his paper wherein he is suggesting that most empirical research just tested earlier growth models, rather than test endogenous theory itself.[3] The author argues that endogenous growth theory will remain a rich expansion of existing growth theory rather than a powerful organizing framework for thinking about actual growth phenomena. One of his empirical findings is that direct support for endogenous growth theory in explaining performance in the OECD countries is weak. The author is convinced that an emerging factor in determining intermediate and long-term productivity growth is an "organizational type", a model that focuses on organization and institutions. In relation to this current research, endogenous growth theory will still be used as framework even though some researchers find it insufficient and unreliable.

[3] Pack, H. (1994). Endogenous Growth Theory: Intellectual Appeal and Empirical Shortcomings. The Journal of Economic Perspectives, Vol. 8, No. 1. pp 55-72.

Despite the arguments and disagreements on the nature and dynamics of endogenous growth theory, economists still find it useful as it provides the platform of explaining economic growth among countries in a convincing manner, though not as encompassing as one would hope to be. In the next section, several studies will be discussed that utilized endogenous growth theory as its framework in investigating the sources of growth.

3.2 Growth empirics

Growth empirics is a product of growth theory. In their quest to understand the different factors that affect growth, economists set out to determine an empirically-based analysis of growth theory. Some of the prominent growth empirics and their findings are the following.

Robert Barro is one of the most active growth empirics. He has done several empirical analyses on his papers about growth theory. In his earlier work on growth theory using data from 1960 – 1985 on 98 countries, he was able to bring out several empirical regularities on growth, fertility and investment.[4] He found out that the correlation of per capita growth and initial level of per capita GDP becomes substantially negative when measures of initial human capital are held constant. On the other hand, growth rate is positively related to the starting amount of human capital given a constant level of initial per capita GDP. Overall, Barro concluded that poor countries tend to catch-up with rich countries if the poor countries have high levels of human capital. Additionally, he found out that countries with high human capital have low fertility rates and high ratios of physical investment.

In his later work, Barro was able to empirically test and state that the panel data he had for 100 countries from 1960 – 1990 support the theory of conditional

4 For further insights on this work, please see: Barro, Robert. (1991). Economic Growth in a Cross Section of Countries. Quarterly Journal of Economics, 106, pp. 407-443.